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ABSTRACT

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THEORETICAL PAPER NO. 39

# MODELING AS A TECHNIQUE FOR PROMOTING CLASSROOM LEARNING AND PROSOCIAL BEHAVIOR

REPORT FROM THE INDIVIDUALLY GUIDED MOTIVATION DEVELOPMENT COMPONENT

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Theoretical Paper No. 39

# MODELING AS A TECHNIQUE FOR PROMOTING CLASSROOM LEARNING AND PROSOCIAL BEHAVIOR

by

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Report from the Individually Guided
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## Statement of Focus

Individually Guided Education (IGE) is a new comprehensive system of elementary education. The following components of the IGE system are in varying stages of development and implementation: a new organization for instruction and related administrative arrangements; a model of instructional programing for the individual student; and curriculum components in prereading, reading, mathematics, motivation, and environmental education. The development of other curriculum components, of a system for managing instruction by computer, and of instructional strategies is needed to complete the system. Continuing programmatic research is required to provide a sound knowledge base for the components under development and for improved second generation components. Finally, systematic implementation is essential so that the products will function properly in the IGE schools.

The Center plans and carries out the research, development, and implementation components of its IGE program in this sequence: (1) identify the needs and delimit the component problem area; (2) assess the possible constraints—financial resources and availability of staff; (3) formulate general plans and specific procedures for solving the problems; (4) secure and allocate human and material resources to carry out the plans; (5) provide for effective communication among personnel and efficient management of activities and resources; and (6) evaluate the effectiveness of each activity and its contribution to the total program and correct any difficulties through feedback mechanisms and appropriate management techniques.

A self-renewing system of elementary education is projected in each participating elementary school, i.e., one which is less dependent on external sources for direction and is more responsive to the needs of the children attending each particular school. In the IGE schools, Center-developed and other curriculum products compatible with the Center's instructional programing model will lead to higher student achievement and self-direction in learning and in conduct and also to higher morale and job satisfaction among educational personnel. Each developmental product makes its unique contribution to IGE as it is implemented in the schools. The various research components add to the knowledge of Center practitioners, developers, and theorists.

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## Abstract

Research has shown that a behavior may be acquired through observing and imitating a model. A behavior which has already been acquired may be inhibited, disinhibited, or elicited by observing and imitating. A definition of imitation is given, and the effects of imitation on learning and performance are summarized. Research on factors which affect imitation is reviewed. These factors include the characteristics of the model, the characteristics of the observer, and the consequences of the behavior to the model and to the observer. Research on imitation of cognitive skills, subject matter knowledge, and prosocial behavior is also reviewed. Finally, techniques are outlined for the use of modeling to facilitate classroom learning and motivation.

# I
# Introduction

The primary task of a school is to teach children subject-matter knowledge and skills. This requires communicating information, demonstrating skills, and motivating children to attend to the subject matter and to persist until mastery is achieved. Schools are also concerned that children develop a value system that will guide their behavior now and in the future. Modeling is an important vehicle for teaching knowledge and skills, motivating children to learn, and helping them to develop a value system.

Research has shown that a behavior may be acquired through observing and imitating a model. A behavior which has already been acquired may be inhibited, disinhibited, or elicited by observing and imitating. Thus, modeling may be an effective way of facilitating learning, bringing about desirable behavior, and controlling undesirable behavior in the classroom.

The models children observe and imitate are classified as real-life, symbolic, or representational. Parents, teachers, and other children serve as real-life models. Models presented to children through oral or written instructions and pictures or through a combination of words and pictures are called symbolic models. Books and group discussion about exemplary behavior may be used to provide symbolic models. Models presented by audio-visual means such as television or films are called representational models. From this brief overview it is clear that there are many potential models for children in the school setting.

Many types of learning can be brought about through modeling. Substantive knowledge (Felker & Milhollan, 1970; Liebert & Fernandez, 1969), problem-solving strategies (Laughlin, Moss, & Miller, 1969), a reflective approach to problem solving (Debus, 1970; Yando & Kagan, 1968), pronunciation of a foreign language, and psychomotor skills (Klausmeier & Ripple, 1971) are examples of learning which can be facilitated by modeling. Social behavior is also strongly affected by modeling. Resistance to temptation, standards of excellence, self-denial, control of aggression (Bandura & Walters, 1963), attitudes (Stotland & Patchen, 1961), and socially appropriate behavior (Sarason, 1968) have been shown to change as a function of imitation. Modeling, therefore, may be used to teach many skills and prosocial behaviors.

To use the technique of modeling skillfully, however, the teacher must understand the nature of imitative learning and the conditions that increase the likelihood of imitation. This paper is intended to assist the teacher in gaining this understanding by describing the effects of imitation, the factors affecting imitation, and the kinds of learning and behavior changes which have been shown to occur through imitation. The paper also provides suggestions for using modeling effectively in the classroom.

## II
## Effects of Imitation

Imitation occurs when a person demonstrates behavior similar to that of a model after the person has observed the model's behavior or has heard descriptions attributing a certain behavior to the model (Flanders, 1968). The behavior may be new to the observer, or it may have been previously learned but not exhibited. Thus, imitation may affect either learning or performance.

Bandura and Walters (1963) illustrated the distinction between learning and performance by the following experiment:

> Children observed a film-mediated model who exhibited four novel aggressive responses accompanied by distinctive verbalizations. In one condition of the experiment, the model was severely punished; in a second, the model was generously rewarded with approval and food reinforcers; while the third condition presented no response-consequences to the model. . . . A post-exposure test of imitative behavior revealed that the differential vicarious reinforcement had produced differential amounts of imitative behavior. Children in the model-punished condition performed significantly fewer imitative responses than children in both the model-rewarded and the no-consequences groups. . . . Children in all three groups were [then] offered attractive incentives contingent on their reproducing the model's responses . . . the introduction of positive incentives completely wiped out the previously observed performance differences, revealing an equivalent amount of learning among the children in the model-rewarded, model-punished, and the no-response-consequences conditions. [Pp. 57-58]

From this experiment, Bandura and Walters concluded that learning of imitative responses results primarily from contiguity of sensory events, whereas performance is governed by the response consequences to the model or to the observer. In observational learning, stimuli from the model's behavior elicit perceptual responses in the observer. These responses, in turn, provide cues for overt responses which match those of the model (Gewirtz & Stingle, 1968).

Bandura and Walters (1963) suggested that observation of models has three somewhat different effects, each of which may lead to an increase in imitation. One effect is for the observer to match the behavior of the model with responses that are new to the observer. This is called a modeling effect. For this to occur, the model must demonstrate behavior which is novel to the observer, but which the observer is capable of doing. In the experiment reported above, children observed a model who performed various aggressive behaviors which the children had not previously exhibited. Subsequently, without reinforcement of any kind, the children demonstrated the same behaviors (Bandura & Walters, 1963).

Observing and imitating a model may also strengthen or weaken inhibitory responses which the observer already has in his repertoire. These are called inhibitory and disinhibitory effects. Inhibition of behavior in the observer's repertoire is likely to occur when the model is subjected to painful consequences or shows a fearful reaction as a result of a certain behavior. The tendency of children to be fearful of the same things as their mothers is explained in this manner. On the other hand, imitation may result in the lowering of previously developed inhibitions. Aggressive behavior is generally disapproved and, to some extent, inhibited. Observation of a model displaying aggressive behavior tends to result not only in an expres-

sion of this particular aggressive behavior, but also in the release of other aggressive behavior which was previously inhibited.

A final effect of imitation that can be demonstrated experimentally, but which one can infer only if he knows the history of the observer, is the eliciting of behavior already in the observer's repertoire. Volunteering services or monetary contributions, pledging oneself to a course of action, and eating foods not ordinarily selected are behaviors that can be elicited through the presentation of appropriate models.

As we have seen, imitation may result in learning new responses. This learning can occur by simply observing a model. Imitation may also lead to the inhibiting, disinhibiting, or eliciting of responses already learned. These changes in performance are related to the response consequences to the model or to the observer when the response is perfomed. Each of these effects may be enhanced or lessened by the conditions under which modeling occurs. The factors which affect the degree of imitation will be described in the next chapter.

# III
# Factors Affecting Imitation

Many factors may affect the amount of imitation shown by an observer. Some of these factors are the characteristics of the model, the characteristics of the observer, and the consequences of the behavior to the model and to the observer.

## Characteristics of the Model

### Status

One factor in imitative learning which has received considerable attention is the status of the model relative to the learner. Several studies have shown that the perceived status or prestige of the model is positively correlated with the amount of imitation shown by the learner (Flanders, 1968). For example, Harvey and Rutherford (1960) found that high status individuals had greater influence on opinions of group members than low status individuals. In one session, each subject indicated his preference for one of two pictures taken from the Meier Art Judgment Test. In a second session, the subject was told the names of two people who purportedly had expressed opposite preferences from one another for the two pictures. These names were those of the highest and lowest status members of the group as determined by sociometric ratings of leadership. In one experimental condition the high status person was represented as having disagreed with the subject's earlier choice; in the other condition the low status person was represented as having disagreed. The subject then indicated his choice of picture again. There was a significant tendency for the sixth- and eleventh-grade subjects to change their original preference to that of the high status person.

Lefkowitz, Blake, and Mouton (1955) showed that the strength of a disinhibiting effect can be influenced by the status of the model. In this experiment, a model changed attire to suggest either high or low social status. While dressed in each attire the model either conformed to or violated a pedestrian wait-walk signal. Changing the status of the violator from low to high increased pedestrian violations from 4% to 14%, which is a highly significant increase.

These illustrative studies indicate that the social status of the model may have a powerful effect on imitation.

### Social Power

A second characteristic of the model which has been shown to affect imitation is the power or control which the model possesses in the learner's social environment. Social power is closely related to status and prestige but may, in some cases, be distinct. It is probable that many people perceived by the learner as having high status do not have power over the learner.

Bandura and Walters (1963) define social power as "the ability . . . to influence the behavior of others by controlling or mediating their positive and negative reinforcements" (p. 95). Bandura, Ross, and Ross (1963) set up two experimental social interaction conditions which established various roles for two adults who interacted with the child subject. In the first condition one adult controlled positive reinforcers, the second adult consumed the reinforcers, and the child was essentially ignored. In the second condition, one adult controlled positive reinforcers, the child consumed the reinforcers, and the second adult was essentially ignored. Following these social interactions, the two adults exhibited different behaviors and a measure was taken of the degree to which each child patterned his behavior after each adult. The adult who

controlled the rewards was imitated to a significantly greater degree than the other adult, regardless of whether the other adult or the child was the recipient of the rewards.

Further evidence of the effect of social power on imitation was provided by Grusec and Mischel (1966). In this study, preschool children interacted either with an adult model who was highly rewarding and would have future control over them as their "new nursery school teacher," or with a nonrewarding model who would not have future control over them since she was a "visiting teacher." After this interaction, the adult modeled various novel behaviors. To determine how many of these behaviors had been learned, children were rewarded for each behavior they could reproduce. The behavior of the model who would have future control was recalled better than the behavior of the model who would not have future control.

These studies suggest that children are more likely to imitate adults who control their rewards and punishments.

### Nurturance

A third characteristic of the model affecting the likelihood of imitation is the model's nurturance toward the learner. Flanders (1968) described a nurturant relationship as one based on noncontingent exchange of affection rather than on affection made contingent upon certain behavior.

Bandura and Huston (1961) predicted that nurturance would increase amount of imitation since the model's display of affection would give him secondary reward properties. To test this prediction, Bandura and Huston set up play sessions with an adult model and nursery school children. For half the children the model assumed a nurturant, rewarding role during these sessions; for the other half she assumed a cold, nonnurturant role. The children were then asked to perform a discrimination problem, while the model exhibited novel behaviors such as marching, aggression toward dolls, and verbal responses. The nurturant model-child relationship led to significantly greater imitation of the marching and verbal responses. There was no significant difference in imitation of aggression, since almost all children imitated this behavior.

The facilitative effect of nurturance on imitation was also supported by a study (Hetherington & Frankie, 1967) dealing with parent-child relationships and imitation. The mother and father of each child in the study were separately rated on a nurturance-hostility scale, based on a structured family-interaction task. The child then observed each parent alternately perform different motor and verbal responses. Following observation of his parents, the child was tested for imitative responses in the parents' absence. The parent high in warmth was imitated significantly more than the parent low in warmth.

Thus, noncontingent affection given to a child by an adult increases the probability that the child will imitate that adult.

Summarizing the effects of model characteristics on imitation, Bandura and Walters (1963) conclude that "models who are rewarding, prestigeful, or competent, who possess high status, and who have control over rewarding resources are more readily imitated than are models who lack these qualities" (p. 107). Since these model characteristics entail actual or inferred response consequences to the model or to the observer, Bandura and Walters inferred that their effect is on performance rather than acquisition of behaviors.

## Characteristics of the Observer

### Self-Esteem

As we have seen, characteristics of the model may have a profound effect on the amount of imitation that occurs. The characteristics of the observer may, in turn, also affect imitation. One of the characteristics of the observer that has been shown to influence modeling is his self-esteem.

DeCharms and Rosenbaum (1960) hypothesized that persons with low self-esteem would show greater conformity in a small-group situation than persons with high self-esteem. This hypothesis was based on the assumptions that conformity may be an attempt to gain the favor of the group and that low self-esteem persons would be more inclined to seek approval. To test the hypothesis, DeCharms and Rosenbaum asked naval aviation cadets to identify slides showing aircraft silhouettes. A light panel in front of the subject indicated the purported responses of three other subjects to the same slide. On half of the trials these responses were unanimously correct; on the other half, unanimously incorrect. Low self-esteem subjects showed significantly more matching of incorrect responses than high self-esteem subjects.

Further evidence for the negative correlation between self-esteem and imitation was provided by Gelfand (1962). This study investigated the effects of self-esteem on the social suggestibility of fifth-grade children. Children

were assigned to high and low esteem groups on the basis of personality inventory scores. Children in each group were then exposed either to consistent success or consistent failure on a series of four tasks. This was intended to experimentally manipulate self-esteem. Subjects who experienced failure showed significantly more imitation on a subsequent task than subjects who experienced success. Imitation was not significantly affected, however, by self-esteem as measured by the personality inventory.

The studies described above indicate that the self-esteem of the observer may be inversely related to the amount of imitation he displays. In adults an extensive reinforcement history may have led to a relatively stable level of self-esteem, while the level of self-esteem in children may vary markedly as a result of success or failure on a particular task.

## Dependency

A second characteristic of the observer which has been shown to affect modeling is the amount of dependency which he shows. Dependency may include both help-seeking and acceptance of suggestions. High-dependent children accept help even in tasks they can perform by themselves. Low-dependent children hesitate to accept help even in tasks which are too difficult for them (Jakubczak & Walters, 1959).

The relationship between dependency and imitation was tested in a study by Jakubczak and Walters (1959). High-dependent and low-dependent groups of nine-year-old children were formed by taking into account children's statements of whether they would or would not accept help on various tasks, combined with their parents' judgment of whether they could or could not perform the tasks. Each child was then exposed to situations in which a peer and an adult gave judgments contrary to his judgment. High-dependent children were significantly more suggestible than low-dependent children, and the effect was much greater when an adult gave the conflicting judgment than when a peer gave it.

Similar effects of dependency on imitation were shown by Ross (1966) for preschool children. Dependency ratings for each child were obtained from the nursery school staff and validated by independent observations of the experimenter. All children were then taught to run a "post office." During this teaching session, the model also performed many irrelevant behaviors. High-dependent children imitated more than twice as many of these irrelevant behaviors than low-dependent children.

These studies illustrate the sometimes dramatic difference in the amount of imitation shown by high- and low-dependent children. Ross (1966) pointed out that this increased imitation gives the high-dependent child an advantage when the model shows no irrelevant behaviors. When behaviors irrelevant to a learning task are modeled, however, the high-dependent child will attempt to imitate all behavior and consequently show less learning. This, in fact, was the case in the Ross study, since low-dependent children had better learning scores on the post office task itself.

## Perceived Similarity to Model

A final characteristic of the observer which may affect amount of imitation is the observer's perception of his similarity to a model. The effect of this variable on changes in prejudice and authoritarianism among female college students was studied by Stotland and Patchen (1961). All students were given a measure of anti-Negro prejudice. Four weeks later they read a fabricated case history of a girl named Carol who was highly prejudiced against minority groups. For half of the students Carol was very similar to themselves in objective characteristics; for the other half of the students Carol's characteristics were quite dissimilar to their own. Four weeks after reading the case history the prejudice scale was readministered. Students initially low in amount of prejudice became significantly more prejudiced when they read the case history of a bigoted model whose background was quite similar to their own. When the model's background was dissimilar, no change occurred. This study suggests that the child may more readily imitate a model whom he believes to be like him in some way than a model who seems quite different from him.

To summarize, there are several characteristics of observers which enhance the amount of imitation observed. These characteristics include the self-esteem and dependency of the learner and the perceived similarity between the model and the learner.

It should be noted that the model characteristics (status, power, and nurturance) and learner characteristics (self-esteem, dependency, and similarity to the model) that have been shown to increase imitation have also been postulated to contribute to "identification." The term "identification" is used in

psychodynamic theory to refer to the process by which a child develops an attachment to and generalized imitation of a particular adult. Various theories of identification have been proposed to account for the conditions under which this imitation occurs, and results of imitation studies are frequently related to one or another of these theories. An excellent summary of identification theories appears in Bandura and Walters (1963, pp. 89-106).

## Consequences of the Behavior

### Reinforcement of the Model

Regardless of the characteristics of the model and of the observer, certain aspects of the modeling situation itself may increase the probability that imitation will occur. One of these aspects is the reward or punishment which the model receives when he exhibits the behavior to be imitated. Numerous studies have shown that reward of the model results in increased imitation, and punishment in decreased imitation. Flanders (1968) suggested that this effect occurs because the learner assumes "If I do that I'll get rewarded (or punished) too" (p. 320).

Illustrative of the studies which have shown increased imitation when the model is rewarded is that of Bandura, Grusec, and Menlove (1967). Elementary school children were asked to help "test" a bowling game designed for use by both children and adults. Each child played the game with an adult model. Both the child and the adult were instructed that they could take tokens whenever they felt they had performed well and that these tokens would be exchanged for prizes at the end of the game. In each case the adult model achieved superior performances and rewarded himself only when he attained a score of 60 points or more. With some of the children, the adult model was praised in the child's presence for setting high standards of excellence; with the other children, no praise was given to the adult for setting high standards. Positive reinforcement of the adult resulted in significantly higher standards of excellence by children than nonreinforcement. Thus, reward to the model resulted in more imitation of the rewarded behavior.

### Reinforcement of the Observer

A second aspect of the modeling situation that may increase the probability that modeling will occur is reward or punishment to the observer for imitating a given behavior. An example of this effect was provided by Liebert and Fernandez (1970). The subjects in this experiment were four- to six-year-old children. The children were told that the experimenter was from a company who made many things for children and adults and that she was interested in finding out "which things people like best." The experimenter then asked an adult model to indicate which item in each of 12 different pairs of commodities he preferred, and the model responded with predetermined selections. Following the model's performance, the child was told it was his turn and was asked to choose one of each pair of commodities. After the child had expressed his preference within each pair, the entire set of slides was shown again. This time, however, he was requested to match the model's behavior and was told he would receive a token each time he was correct. When offered a reward for imitative behavior, children offered significantly more matching responses. Thus, direct reward appears to be an effective technique for increasing the performance of imitative behavior.

## Summary

The amount of imitation shown by a child may be related to the characteristics of the model which he observes. More imitation occurs when the model has high leadership or social status, controls rewards or punishments to the learner, or has a nurturant relationship with the learner. Learners are more likely to imitate a model when they are low in self-esteem, highly dependent, or see themselves as quite similar to the model. Finally, imitation is affected by the consequences of the behavior either to the model or to the learner. When the behavior is rewarded, imitation increases; when it is punished, imitation decreases.

# IV
# Types of Imitative Behavior

Many studies of imitation have focused on the modeling of bizarre responses. Recently, however, several experiments have dealt with the imitation of behavior resulting in the learning of subject matter or the performance of prosocial responses. The nature of the modeled behavior in each of these experiments will be described briefly to indicate the potential uses of imitation in the classroom. In each of these experiments, variables were manipulated to ascertain their effect on amount of imitation. This review, however, will focus only on the imitated behavior.

## Cognitive Skills and Subject Matter Learning

### Strategies

A study by Laughlin, Moss, and Miller (1969) indicated that efficient problem-solving strategies may be communicated through modeling. The problem confronting the child was to identify an object which the experimenter had in mind by asking questions which could be answered "yes" or "no." The task was a modification of the familiar "20 Questions" game. Prior to playing the game some of the children observed an adult play the game, while others played the game without observing an adult. The adult model employed either a hypothesis-scanning strategy consisting of a series of unrelated specific questions (e.g., "Is it a dog?"), or a constraint-seeking strategy consisting of a series of questions each comprehensive enough to include at least two objects (e.g., "Is it larger than a dog?").

The percentage of constraints used by children who had observed the constraint-seeking model was significantly higher than children who had not seen a model. Children who had not seen a model, in turn, used more constraints than children who had observed a hypothesis-scanning model. This study is quite relevant to the school situation, since it indicates that problem-solving strategies may be taught to children through modeling.

### Conceptual Tempo

Research has shown that people tend to consistently display either slow or fast decision times in problem situations. The terms "reflective" and "impulsive" are used to refer, respectively, to individuals who exhibit slow or fast decision times. Conceptual tempo is of special concern in education, since reflection is associated with better reading recognition and inductive reasoning.

A study by Yando and Kagan (1968) indicated that children taught by reflective teachers may themselves become more reflective. First-grade children were administered the Matching Familiar Figures Test in the fall and spring of their first year in school. Children who had been taught by experienced reflective teachers showed a dramatic increase in response time from the fall to spring testing, indicating a more reflective conceptual tempo. Although it was not possible to determine the exact reason for the change, Yando and Kagan conjectured that it was due to a combination of modeling and reward.

A later study by Debus (1970) confirmed the effect of modeling on conceptual tempo. Third-grade children who had an impulsive conceptual tempo observed sixth-grade models take the Matching Familiar Figures Test. Children who observed a reflective model became significantly more reflective after this observation.

### Knowledge

Modeling may also facilitate direct substantive learning. Liebert and Fernandez (1969)

demonstrated that imitation increased performance on a task that required six- and seven-year-old children to identify a designated target state when shown slides depicting three U.S. states. Children were given a pretest, observed an adult model, then were rewarded for each of the adult's responses they could match. Imitation was inferred since adult models had sometimes been rewarded for their correct responses, and sometimes not rewarded. The children's performance was better when the model had been rewarded.

A second study showing cognitive learning through imitation is that of Felker and Milhollan (1970). The task in this case entailed spelling and syllabication by fourth-grade students, following a model provided by their teacher.

These brief reviews indicate that modeling may have a strong effect on cognitive learning. Imitation has been shown to be effective in teaching strategies, changing conceptual tempo, and communicating substantive knowledge. These kinds of learning outcomes are important aspects of the school's curriculum.

## Prosocial Behavior

### Self-Control

Bandura and Walters (1963) report cross-cultural comparisons and experimental studies which suggest that modeling influences the learning of many aspects of self-control. Some of these aspects include resistance to temptation, standards of excellence, self-denial and self-indulgence, and control of aggression.

The effect of modeling on standards of excellence was noted earlier in the report of the experiment by Bandura, Grusec, and Menlove (1967). Children imitated a model who was reinforced for setting high standards of excellence, taking tokens only for very good performance.

### Socially Appropriate Behavior

Sarason (1968) conducted a series of studies dealing with the effects of modeling on the social behavior of institutionalized juvenile delinquents. Subjects observed a series of modeling sessions in which two graduate students in clinical psychology played various roles. The description of the sessions given by Sarason is as follows:

> Each session had a particular theme, e.g., applying for a job, resisting temptations by peers to engage in antisocial acts, taking a problem to a teacher or parole counselor, foregoing immediate gratifications in order to lay the groundwork for more significant gratifications in the future. In each situation, an emphasis was placed on the generality of the appropriate behaviors being modeled in order to emphasize their potential usefulness. An example of one of these situations is the job interview scene, in which roles are played by an interviewer and a job applicant. The dialogue emphasizes the kinds of questions an interviewer might ask and the various positive, coping responses an interviewee is expected to make. Also, such factors as proper appearance, mannerisms, honesty, and interest are stressed. [P. 260]

Boys who took part in modeling sessions showed more change in behavior and attitude than boys who did not participate. Examples of behaviors which were rated to determine the effects of modeling are table manners, lying, and self-control. Thus, modeling appears to be an effective technique for developing socially appropriate behavior.

The studies mentioned above show that modeling may be employed to foster social learning as well as cognitive learning. Developing self-control and learning to cope effectively with social situations are two important aspects of social development which should be encouraged by the schools.

# V
# Increasing Motivation and Learning Through Modeling

As noted in the preceding sections, many kinds of behavior may be learned through modeling. Also, behaviors which have already been learned may be inhibited, disinhibited, or elicited. Because of the wide range of behaviors affected by modeling, it is an excellent approach to increasing motivation and learning in the classroom.

Various characteristics of the model, of the observer, and of the modeling situation affect the amount of imitation which occurs. By taking into account the factors shown to increase imitation, the teacher may make effective use of modeling techniques. This section will suggest ways in which learning and motivation may be facilitated by providing exemplary models. Other suggestions for implementing modeling in the classroom have been offered by White (1969).

## Individually Guided Motivation (IGM)

To assist the schools in their task of teaching subject matter and fostering self-directed prosocial behavior, the Wisconsin R & D Center has formulated a system of Individually Guided Motivation (Klausmeier, Frayer, & Quilling, 1972). This system is based on a set of principles about motivation derived from research and theory. These principles, in turn, serve as the basis for a set of instructional guides. The motivational principles and related instructional guides are outlined in Table 1.

These instructional guides are implemented in four motivational-instructional procedures: (a) adult-child conferences to encourage independent reading, (b) teacher-child conferences for goal setting, (c) guiding children as tutors, and (d) guiding children toward self-directed prosocial behavior. These procedures will be outlined in the following sections. Although each procedure implements several of the instructional guides, emphasis in each case will be placed on the instructional guide related to modeling—"provide real-life and symbolic models."

### Adult-Child Conferences to Encourage Independent Reading

Adult-child conferences to promote independent reading are held once a week during school hours for each participating child and last about 10 to 15 minutes. A teacher, instructional aide, or volunteer may conduct the conferences, which are held as part of the regular instructional program in reading. Conferences have proved highly successful with children who previously read little or nothing except assigned reading.

The objectives of the conferences are to increase the child's motivation for reading, to encourage him to read independently during and outside school hours, and to increase his reading speed and comprehension. To attain these goals the adult conference leader models desirable reading behavior and attitudes, guides the child's choice of books, helps him set goals for reading, provides feedback, and praises the child's efforts and accomplishments.

Modeling can be effectively used in many ways during the conference. First, the adult who is conducting the conference may directly demonstrate an interest in reading by being engaged in reading when the child comes in for a conference, or by starting to read a book, newspaper, or magazine as the child leaves the conference. To increase the probability that the child will imitate the behavior, the adult might comment that he enjoys reading and found what he read interesting. This type of comment indicates to the child that reading was rewarding to the adult.

Table 1*
Motivational Principles and Corollary Instructional Guides

| Motivational Principle | Instructional Guide |
|---|---|
| 1. Attending to a learning task is essential for initiating a learning sequence. | 1. Focus student attention on desired objectives. |
| 2. Observing and imitating a model facilitates the initial acquisition of many behaviors including prosocial behaviors such as self-control, self-reliance, and persistence. | 2 Provide real-life and symbolic models. |
| 3. Verbalizing prosocial values and behaviors and reasoning about them provides a conceptual basis for the development of the behaviors. | 3. Provide for verbalization and discussion of prosocial values. |
| 4. Setting and attaining goals require learning tasks at an appropriate difficulty level; feelings of success on current learning tasks heighten motivation for subsequent tasks; feelings of failure lower motivation for subsequent tasks. | 4. Help each student set and attain goals related to the school's educational program. |
| 5. Acquiring information concerning correct or appropriate behaviors and correcting errors are associated with better performance and more favorable attitudes toward learning tasks. | 5. Provide informative feedback and correction. |
| 6. Expecting to receive a reward for specified behavior or achievement directs and sustains attention and effort toward manifesting the behaviors or achievement. Non-reward after a response tends to extinguish the response. Expecting to receive punishment for manifesting undesired behavior may lead to suppression of the behavior, to avoidance or dislike of the situation, or to avoidance and dislike of the punisher. | 6. Use rewards freely at the proper time. |

*Reprinted from Klausmeier, Frayer, and Quilling (1972, pp. 39-40).

In many cases, direct modeling of reading may not be feasible in the context of the conference. Symbolic modeling, however, may be readily used and can be quite effective. To use symbolic modeling, the adult might mention that he often reads books for pleasure. In commenting on reading, he might mention particular types of books he likes, times of the day when he finds time for reading, and how much he enjoys reading. Detailed comments such as this provide a realistic model and indicate to the child that independent reading is a rewarding experience.

Other symbolic models may also be used in reading conferences. Showing a picture of a possible model reading, informing the child of the reading behavior of a possible model, and indicating the values of independent reading to other persons who may serve as models for the child are ways of using symbolic modeling. The models selected should either be similar to the child so that the child feels the

model is like himself or be a person the child admires and would strive to emulate.

## Teacher-Child Conferences for Goal Setting

In this procedure, a teacher holds weekly goal-setting conferences with individual children as part of the regular instructional program. After the children gain some proficiency in goal setting, the teacher may work with small groups of children, rather than with individuals. The teacher guides each child in setting goals and plans the child's instructional program so that he has an opportunity to attain his goals. Goal-setting conferences have been highly successful in improving the performance of children in reading and mathematics.

The objectives of goal-setting conferences are to increase the motivation of the student in a particular subject matter, to increase the self-direction of the student by teaching him to set realistic goals, and to bring about higher achievement in the subject matter of the goal setting. It is also expected that students who learn to set realistic goals in one subject matter will set goals independently in other subject matters. To attain these objectives, the teacher applies motivational principles during the goal-setting conferences—focusing the student's attention on objectives; guiding him in setting weekly goals; providing feedback about the student's accomplishments and goal-setting accuracy; and praising the student's efforts, his attainment of goals, and his accuracy in setting goals.

Although the primary instructional guides implemented during goal-setting conferences are focusing attention, goal setting, providing feedback, and reinforcing, modeling may also play a supporting role. The teacher might describe situations in which he has set goals, worked hard to attain them, and felt a sense of accomplishment when he reached them. These examples should help the child understand what goal setting is and elicit a desire to work toward his goals in order that he, too, might feel a sense of accomplishment.

## Guiding Older Children as Tutors

In regularly scheduled sessions, a child-tutor provides assistance to a child one to four years younger than himself. Normally children of intermediate age tutor those of kindergarten-primary age. However, in an instructional and research (I & R) unit, children who know the subject matter well may tutor other children of about the same age who do not know it as well. The tutoring sessions may be held daily or less frequently. The sessions are 15 to 25 minutes long for tutees five to nine years of age, but may be longer for older children.

In the tutoring sessions, the older child guides the younger child's practice of skills or his independent study activities. Tutoring is carried out as part of the younger child's regular instructional program in a particular subject matter area. The objectives of the tutoring program for the tutee are to increase his level of motivation and achievement in the subject matter area and to increase his self-direction in learning. The tutors are taught to set a good example, correct mistakes, and praise the younger child.

Modeling is an important aspect of tutoring. The tutor is close enough in age to be perceived by the younger child as similar to himself. The fact that he is slightly older and knows the subject matter to be studied gives him status in the view of the learner. The tutor is encouraged to get acquainted with the child he tutors and show that he likes him. Noncontingent affection such as this should increase the amount of imitation which occurs.

During the tutoring sessions, the tutor models the skills to be learned. For example, the older child may read aloud a passage from a book, reading with expression. The younger child reads the same passage, following the example of the tutor. The tutor praises the child for reading with expression (imitating), thereby increasing the probability that he will continue showing this behavior. This same general process occurs in many situations as the tutor works with the younger child; the tutor models a behavior, the younger child imitates that behavior, and the tutor praises him for imitating.

In addition to providing a model for skills to be learned, the tutor shows a good attitude toward school and interest in the subject matter. Thus, tutoring can affect attitudes toward learning as well as what is learned.

## Guiding Children Toward Self-Directed Prosocial Behavior

A teacher or aide regularly conducts conferences about 20 minutes in length with small groups of three to seven children. The conferences are usually held once a week but may occur every two weeks. To assure available time and good conference conditions, the conferences are carried out as an integral part of the instructional program in social studies, language arts, or some other curricular area. Conferences are held throughout the school

year and all children above the age of six or seven participate at some time during the year.

The main purposes of the conferences are to increase the self-directedness of the children and to encourage prosocial behaviors. Prosocial behaviors are behaviors that are approved by large segments of our society and contribute to the individual's self-realization as well as to good citizenship. As children participate in conferences, they rely more on themselves and less on adult authorities for guiding their behavior. When conducting the conferences, the teachers apply five motivational principles: reasoning about behavior, providing exemplary models, helping set goals, giving feedback and correction, and reinforcing desired behaviors. Emphasis is placed on reasoning about behavior; that is, helping the child think about why he behaves in certain ways and considering the possible consequences of his behavior for himself and others.

The use of reasoning during the conference is intimately intertwined with symbolic modeling. In fact, symbolic modeling may be considered one aspect of reasoning. Bandura and Walters (1963) describe the relationship in this way:

> [Reasoning includes] descriptions of the ways in which the child's undesirable behavior may have untoward consequences for others—for example, pain, inconvenience, or embarrassment—of which the child may not be aware. To the extent that the child has already been conditioned to avoid producing consequences of these kinds, the parent's account of the effects that may result from the child's behavior may be in itself sufficient to deter the child from acting in the disapproved way. Reasoning may also involve explanation of possible motives for the placing of restraints on the child's behavior by parents or others, thus forestalling resentment and intense attempts to modify or neutralize the behavior of the controlling agent. Moreover, it sometimes includes symbolic modeling in the form of presenting examples or detailed instructions of alternative prosocial modes of response that the child can adopt when a similar situation arises at a future time. While focusing on consequences may serve primarily to inhibit behavior that the parent desires to forestall, examples of prosocial behavior and explicit instructions of how to behave in a prosocial manner provide standards by means of which a child can guide and evaluate his actions. [P. 195]

In small group conferences, the teacher may show a film or filmstrip, tell an anecdote, or have children read a story as a basis for discussion and reasoning. For example, Arnspiger, Brill, and Rucker (1969) have published a series of books on values, dealing with such topics as respect, honesty, fair play, responsibility, and dependability. Problem situations are presented like those which might be encountered by children, and possible solutions to the problems are given. The stories discuss situations in school, at home, and in the neighborhood; the characters are from different social backgrounds. Books like these may provide models with whom the students will identify and whose behavior they will subsequently imitate.

In the conference, teachers may discuss student conduct with the children, guiding them in thinking of alternative constructive responses which they could make in given situations. Emphasis is placed on the rewards of making particular responses. The descriptions of desirable ways of behaving in particular situations become symbolic models for the children.

### Summary of Individually Guided Motivation

Four motivational procedures have been developed which implement instructional guides such as helping set goals, providing exemplary models, giving feedback, and praising accomplishments. The objective of IGM is to increase motivation for learning and self-directed behavior. Each of the four procedures which comprise IGM entails working with an individual student or small groups of students. In the following sections, ways of using modeling with large groups of children are described. Again, the intent of modeling is either to increase learning or to encourage prosocial behavior.

## Increasing Learning Through Modeling

Wodtke and Brown (1967) have pointed out that teaching practices such as the use of lectures, films, science demonstrations, and audiotapes in the language laboratory all imply observational learning. As Ross (1966) noted, these modeling situations should not include irrelevant behavior since children may imitate all behavior, both relevant and irrelevant. Teachers should also arrange to have the chil-



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dren perform the learned behavior and reward their performance.

The problem-solving ability of children can be greatly improved through modeling. Instead of simply confronting children with problems, the teacher may demonstrate problem solving. In this way, he can model efficient strategies and a reflective conceptual tempo.

## Increasing Prosocial Behavior Through Modeling

The teacher is probably a model for all children at various times because students are continually observing the teacher, and because they see him as having prestige and controlling their rewards and punishments, they are very likely to imitate him. His behavior may serve as a model for social learning as well as cognitive learning. Because of this potential for modeling, the teacher should be aware of his own social behavior—attempting to set a good example for such behaviors as thoughtfulness, self-control, and generosity.

Another type of exemplary model that might be brought into the classroom is a speaker from the community. An important aspect of this speaker's talk might be providing a vivid description of the things he has done and the rewards and punishments associated with them. For example, a sports figure might describe his perseverance through long hours of training and the recognition which he has received because of his accomplishments. In one school, a former prisoner described the crimes he had committed and how he suffered loneliness, rejection, unemployment, and loss of his home because of them. In choosing speakers, the teacher might well keep in mind that perceived similarity increases imitation. Members of a minority group may be brought into the classroom to speak to children belonging to that group.

Symbolic models of desired behavior may be provided through books. For example, biographies and autobiographies describe the things which persons have done and the rewards and punishments which have resulted. These books set examples of creativity, courage, steadfastness, and ambition.

## Summary

Many kinds of exemplary models may be provided for children. Teachers, older children, and members of the community are people whom students may admire and imitate. Discussion, books, and films may furnish symbolic models, showing the consequences of various behaviors. In using models, the teacher should be aware that the children are more likely to imitate models who have high status, control rewards and punishments, and are perceived as being similar to themselves. The probability of imitation is also increased when the model receives rewards for his behavior and when the learner himself is rewarded for exhibiting the behavior.

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